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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/734,467
Filing Date: December 12, 2003
Appellant(s): FADER ET AL.

MAILED

JUN 04 2007

GROUP 3600

David L. Wysz, Reg. No. 46,350
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed January 23, 2007 appealing from the Office action mailed August 3, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

European Patent Application, EP 0 496 949 A1, (Oct. 12, 1991), entire document.

Translation provided.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 14-20 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 0 496 949 (cited in Applicant's IDS).

EP '949 discloses a stabilizer bar assembly comprising a stabilizer bar (9) and an anti-shift collar (11 and 11a) formed onto/built upon the stabilizer bar. Applicant is informed again that the method of forming, in the instant applicant, thermally forming or application of a molten material, the device, is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight in

this rejection. Examiner must only provide the structure present in the final product. The method of making the final product is not given patentable weight in apparatus claims. Applicant has claimed a stabilizer bar with an anti-shift collar.

EP '949 discloses the anti-shift collar comprises an "array" of raised spots or lines, as there are a plurality of raised portions that make up the anti-shift collar that are broadly considered "spots" or "lines". Furthermore, the anti-shift collar includes a raised line, which is one of the raised portions, extending about a circumference of the stabilizer bar.

(10) Response to Argument

Response to Appellant's Argument "A": EP '949 is non-analogous art.

Examiner states that EP '949 is a 102(b) reference and therefore an argument that the reference is non-analogous is not appropriate. Any structural limitation in Appellant's claims has been clearly disclosed/shown in EP '949, as the structural element (9) is a stabilizer bar (in a suspension arrangement) as Appellant's. Any method of making the anti-shift collar is not germane to the issue of patentability of the device itself, and therefore Examiner has not given patentable weight to the method of making the stabilizer bar with the anti-shift collar. Examiner points to page 4, lines 14-16 of EP '949 translation, where it is stated that the stabilizer bar is kept in place in such a way that it can rotate, but so that it cannot be shifted in the vehicle's transverse direction (i.e. Anti-shift).

Response to Appellant's Argument "B": EP '949 fails to disclose an anti-shift collar thermally formed *onto* a stabilizer bar.

Examiner restates that the method of forming the device is not germane to the issue of patentability of the device itself. EP '949 shows all the claimed structure of Appellant's claimed invention.

Response to Appellant's Argument with respect to Claim 14:

Appellant argues that EP '949 fails to disclose a solidified material "atop" an outer surface of the stabilizer bar.

Examiner states that the structural "collar" of EP '949 is "atop" the stabilizer bar and clearly a solidified material. Again, Appellant is arguing the method of making the

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stabilizer bar anti-shift collar onto (by the implied method of “solidifying” a once non-solid material) the stabilizer bar and the method has not been given weight.

Response to Appellant’s Argument with respect to Claim 15:

Appellant argues that EP ‘949 fails to disclose a collar “built up upon” an outer surface of the stabilizer bar.

Examiner restates that the method of making the anti-shift collar is not germane to the issue of patentability of the device itself, and therefore Examiner has not given patentable weight to the method of making the stabilizer bar with the anti-shift collar. EP ‘949 structurally shows the final state of the device having an anti-shift collar that is built up upon the stabilizer bar simply because it is a raised (array) area.

Response to Appellant’s Argument with respect to Claim 16:

Appellant argues that EP ‘949 does not meet the limitation of a “localized application of molten material only an outer surface of said stabilizer bar”.

Examiner restates that the method of making the anti-shift collar is not germane to the issue of patentability of the device itself, and therefore Examiner has not given patentable weight to the method of making the stabilizer bar with the anti-shift collar.

Response to Appellant’s Argument with respect to Claim 17:

Appellant argues that EP ‘949 fails to disclose an array of raised areas comprise a plurality of discrete areas spaced apart from each other.

Examiner states that the 2 (plurality) raised peaks that define the anti-shift collar are spaced apart and define the array, along with the raised/inclined areas that define each of the peaks of the anti-shift collar.

Response to Appellant’s Argument with respect to Claim 18:

Appellant argues that EP ‘949 does not meet the “locally applied to an outer surface” limitation.

Examiner restates that the method of making the anti-shift collar is not germane to the issue of patentability of the device itself, and therefore Examiner has not given patentable weight to the method of making the stabilizer bar with the anti-shift collar.

Response to Appellant’s Argument with respect to Claims 19 and 20:

Appellant argues that EP ‘949 fails to meet the limitations that the collar is “applied to the outer surface” of the bar.

Examiner restates that the method of making the anti-shift collar is not germane to the issue of patentability of the device itself, and therefore Examiner has not given patentable weight to the method of making the stabilizer bar with the anti-shift collar.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

George D. Spisich




Conferees:

Meredith Petravick, Appeal Specialist



Paul Dickson, SPE, Art Unit 3616



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PTO 2006-6206

Translated from the German

European Patent Office

EUROPEAN PATENT APPLICATION

EP 0 496 949 A1

IPC: B60G 21/055; F16f 1/16

Date of application: October 12, 1991

Priority data: January 31, 1991 DE 4102823

Date the unexamined European Patent Application, on which no grant has taken place on or before the said date, has been made available to the public by printing or similar processes:

Designated high contracting parties to regional patent conventions: DE FR GB IT

Applicant: Dr. Ing. h. c. F. Porsche A. G., Porschestraße 42, Stuttgart

Inventor: Francesco Germano, residing in Stuttgart

Title in German of the object of the invention: Fahrschemel

SUSPENSION SUBFRAME

The invention pertains to a suspension subframe (axle support; bogie), having arrangements of bearings (mountings) for a hub-carrier-side mounted, pivoted stabilizer bar of a wheel suspension of a vehicle in accordance with the preamble of claim 1.

From the French patent FR-PS 24 80 683, there is known a stabilizer, which is kept in place in arrangements of bearings (mountings) on a stable and self-supporting suspension subframe, attached on the structure side, which stabilizer is kept in place on the end-side on the hub [wheel] carrier of a wheel. The stabilizer is designed as a bar, and has an outward bulging in the part, passing transversely, which outward bulging is surrounded in a positive (form-fitting) way by a bearing bushing or half-bearing, and is attached on the upper side of the suspension

subframe. This stabilizer has only the task to adjust the vehicle wheels independently from one another in their spring-suspension motion, which vehicle wheels are retained by means of wheel-suspension members on the suspension subframe, designed as self-supporting unit, and an influencing of the subframe with respect to its stability is not provided.

It is an object of the invention to create a stable suspension subframe in conjunction with a stabilizer for a wheel suspension of a motor vehicle, which suspension subframe guarantees an exact wheel motion of both wheels.

In accordance with the invention, the set objective is achieved by means of the characteristic features of claim 1. Additional, advantageous features are contained in the subclaims.

The suspension subframe itself - consisting of two legs and a transverse bridge and designed as a light-weight structure - is relatively torsionally flexible, as a result of legs, having small cross-sectional areas, which is disadvantageous for the exact function of the wheel suspension. Such a suspension subframe is designed in an advantageous way in accordance with the invention as stable and torsionally-resistant supporting structure by means of a stabilizer bar, used as additional transverse bridge. This supporting framework is produced by means of a relatively rigid tie or link of the transversely passing stabilizer-bar segment by way of an arrangement of bearings on the legs of the suspension subframe. The arrangements of bearings (mountings) are preferably provided on the free ends of the legs [webs], and have a continuous, wedge-shaped molding in the stabilizer bar, which wedge-shaped molding matches a continuous, positive

(form-fitting), wedge-shaped molding on a bearing outer part, and guarantees a reliable fixing of the legs of the suspension subframe.

This reliable fixing of the legs is in particular achieved by designing the mutually engaged in-shaped, 1 wedge-like molding and the out-shaped molding of the receptacle on the bearing=s outer part, whereby the characteristic of the elastic bushing in the transverse direction of the vehicle is relatively rigid so that the stabilizer bar cannot be shifted transversely.

The bearing=s outer part is designed as bushing element, and - for the sake of a facilitation of the installation - consists of two half-bearings (half-shells), whereby one of the half-bearings is rigidly connected, e.g., by welding, to a supporting bracket [console], which is screwed onto the leg of the suspension subframe. The two half bearings are kept together by means of screws whereby the bar of the stabilizer can be provided with the wedge-shaped molding on the stabilizer bar as well as in a bushing, connected to the bar by welding, shrinking or similar processes, or the wedge-shaped molding can be achieved on the bar by a squashing (swaging) or compressing process.

The stabilizer can also be arranged in a second transverse bridge, arranged at an interval to the first transverse bridge, and together with the this second bridge can form a reinforcement unit for the suspension subframe.

An exemplified embodiment of the invention is diagrammatically represented in the drawing, and is described as follows.

Fig. 1 is a diagrammatic representation of a top view of the suspension subframe, having arrangements of bearings (mountings) and a stabilizer,

Fig. 2 is a top view of an arrangement of bearings of the stabilizer, having a continuous,

wedge-shaped molding,

Fig. 3 is a section through a bearing arrangement, in the direction of travel Z of Fig. 1

Fig. 4 is a section along line IV- IV of Fig. 3,

Fig. 5 is a section through a wedge-shaped receptacle on the stabilizer-bar, having bearing=s outer part.

The subframe 1 comprises two legs 3 and 4, connected by means of a transverse bridge 2, which have arrangements of bearings (mountings) 7 and 8 on their free front-side ends 5 and 6 for a stabilizer bar 9. The latter is designed as U-shaped stabilizer bar, and is pivoted on the wheel carrier [hub carrier] 20 with the help of its bent-off arms.

On the one hand, the stabilizer bar 9 connects - by means of its arrangements of bearings (mountings) 7 and 8 - the two legs 3 and 4 of the suspension subframe to one another in a way, which is in conformity with the strength, and, on the other hand, the stabilizer bar 9 is kept in place in such a way that it can rotate in the arrangements of bearings (mountings) 7 and 8 but so that it cannot be shifted in the vehicle=s transverse direction (arrow directions 18). As a result of these fastening devices of the stabilizer bar 9, a stable interconnection of the suspension subframe 1 is formed, which now forms - in an apparently similar way - two transverse bridges arranged at an interval from one another, by means of the transverse bridge 2 - which is the rear, first one in relation to the direction of travel - and by means of the second transverse bridge, formed out of the stabilizer bar 9, and th two legs 3 and 4 of the subframe 1 have a relatively rigid tie.

The arrangement of bearings 7 and 8 have receptacles 10 on the stabilizer bar 9, which consist of an uninterrupted, negative molding [in-shaping 11. In its smallest diameter, the receptacle 10 has a diameter, corresponding to the outer diameter d of the bar 9, whereby in their largest diameter, the ascending flanks 11a have a diameter D , exceeding the bar diameter. A corresponding positively embodied out-shaping 12 of a bearing's outer part 13 is engaged with this in-shaping or molding 11, whereby the flanks 12a of the out-shaping 12 are arranged parallelly to the flanks 11a of the in-shaping 11. Between the in-shaping 11 and the out-shaping 12, there is arranged an elastic bushing 14, which has a relatively hard characteristic in the vehicle's transverse direction.

The bearing outer part 13 consists of two half-bearings [half shells] 13a and 13b whereby one of the half-bearings 13a is rigidly connected to a bracket 16, and the other half-bearing 13b can be attached on the half-bearing 13a by means of screws 17. Between the two half-bearings 13a and 13b, the area of the stabilizer rod 9 together with the in-shaping 11 is kept in a clamped state. The brackets 16 -as depicted greater detail in Fig. 3 - are attached on the legs 3 and 4 of the suspension subframe 1, The wedge-shaped in-shaping 11 on the stabilizer bar 9 is embodied as wedge-shaped one in such a way that it cannot be shifted in the transverse direction to the vehicle (arrow directions 18), which can be achieved by means of a corresponding characteristic of the elastic bushing 14, which - in that case - is embodied as correspondingly hard.

As diagrammatically represented, the wedge-shaped in-shaping [molding] 11 can be produced monolithically with the bar 9 by means of a swaging or shortening-by- forging, respectively compression process.

However, in addition to this, it is also possible to design a bushing having a single in-shaping 11,

and to shrink this bushing upon the abr 9, or weld the same to the abr 9.

Patent Claims

1. Suspension subframe, having arrangements of bearings or mountings for a stabilizer bar of a wheel suspension of a motor vehicle,, which stabilizer bar is articulated on the wheel-carrier side, and which mountings, or arrangements of bearings, are on free ends of legs of the suspension subframe, attached on the vehicle, **characterized in that** the stabilizer bar (9) is designed as additional transverse bridge of the suspension subframe (1), and is supported in the mountings [arrangement of bearings] (7 and 8) of the stabilizer bar (9), which mountings or arrangements of bearings are arranged on the front-side ends (5, 6) of the legs (3, 4), and retain the stabilizer bar (9) in the vehicle=s transverse direction (18).

2. Suspension subframe as claimed in claim 1, characterized in that the arrangements of bearings, or mountings, (7 and 8) consist of receptacles (10), which are passing at an interval on the circumferential side on the bar (9) of the stabilizer, as well as of bearing outer parts (13), corresponding to, or matching in a positive or form-fitting way these receptacles (10).

3. Suspension subframe as claimed in claim 1 or 2, characterized in that the receptacles (10) of the stabilizer bar (9) consist of an uninterrupted, negative, wedge-shaped in-shaping [molding] (11), into which - while an elastic bushing (14) is inserted - the bearing outer part (13), having an uninterrupted, positive, wedge-shaped out-shaping [molding] (12) engages.

4. Suspension subframe, having arrangements of bearings or mountings - for a stabilizer bar of a wheel suspension of a vehicle, which stabilizer bar is articulated on the wheel-carrier side - on free ends of legs of the suspension subframe, attached on the vehicle=s structure, which legs are connected to one another oppositely to the mountings by means of a single transverse bridge ,

characterized in that the receptacles (10) of the stabilizer bar (9) consist of an uninterrupted, negative, wedge-shaped in-shaping (11), respectively, and - while an elastic bushing (14) is inserted - the bearing's outer part (13) engages with an uninterrupted, positive, wedge-shaped out-shaping (12).

5. Suspension subframe as claimed in claims 1, 2, 3, or 4, characterized in that the wedge-shaped in-shaping (11) has surfaces (flanks 11a), which are at an obtuse angle (α) with respect to one another, whose parallel surfaces (flanks 12a) are situated oppositely to the out-shaping (12).

6. Suspension subframe, as claimed in claim 1, 2, 3, 4, or 5, characterized in that the two circumferential surfaces (flanks 11a) of the in-shaping (11) have a diameter (d_1) in the area of coincidence, which diameter approximately corresponds to the outer diameter (d_0) of the bar (9), and the largest diameter (D) of the circumferential surfaces (11a) exceeds the bar's diameter (d).

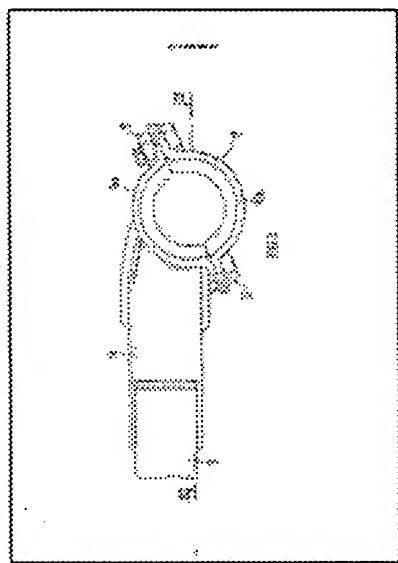
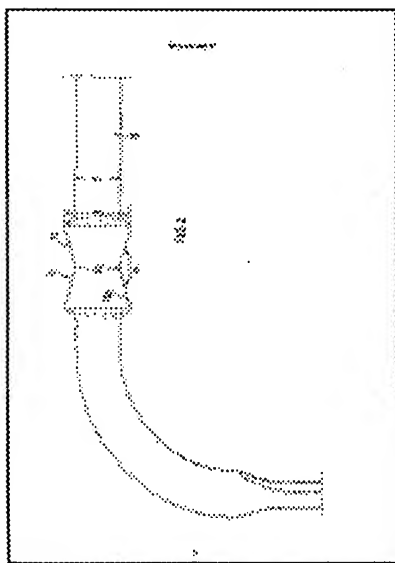
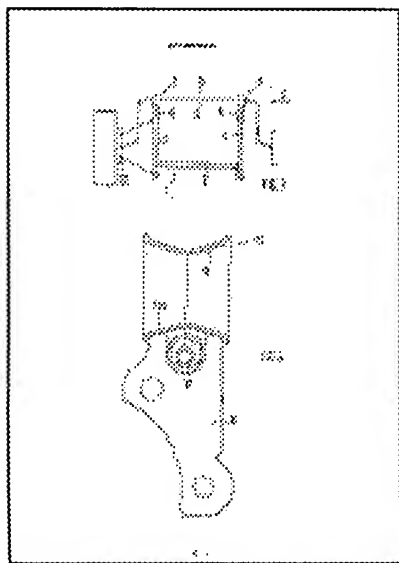
7. Suspension subframe as claimed in one or more of the preceding claims, characterized in that the bearing's outer part (13) is designed as consisting of two shells or half-bearings, whereby the first half-bearing-like bearing's outer part (13a) can be attached in an undetachable manner to an attachment bracket (16) of the suspension subframe (1), and the second half-shell bearing's outer part (13b) can be attached by means of screws on the first outer bearing's part (13a) when the stabilizer bar (9) is accommodated so that it is entirely embraced or surrounded.

8. Suspension subframe as claimed in claims 1 thru 5, characterized in that the negative receptacles (10) of the stabilizer bar (9) are designed as consisting of a swaged and compressed uninterrupted in-shaping (11), which together with the bar (9), are designed as a monolithic part.

9. Suspension subframe as claimed in claims 1 thru 5, characterized in that the receptacles (10) consist of bushings, having a wedge-shaped in-shaping, which bushings are shrunk upon the stabilizer bar (9).

10. Suspension subframe as claimed in claims 1, characterized in that the receptacles (10) consist of bushings, shifted upon the stabilizer bar, which bushings are having a wedge-shaped in-shaping (11), and the bushings are connected to the bar (9) by welding.

Translated from the German by John M Koytcheff
The USPTO Translator (German & Germanic languages)
USPTO/STIC
August 16, 2006



Drawing pages of EP0406940

